2021 S.L. Gimbel Foundation Fund
Grant Application

Internal Use Only:
Grant_____

Organization / Agency Information

1)Organization/Agency Name: United Network for Organ Sharing (UNOS)		
2)Physical Address: 700 N. 4th Street		***City/State/Zip*** Richmond, VA 23219
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4)CEO or Director: Brian M. Shepard		***Title:*** CEO
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Program / Grant Information

Interest Area: ☐Animal Protection ☐Education ☐Environment ☐Health X Human Dignity

14)Program/Project Name: Organ Transportation and Logistics Innovations			***15)Amount of Grant Requested:*** $836,208.30
16)Total Organization Budget: $71,752,640	***17)Per 990, Percentage of <u>Program Service Expenses</u> (Column B/ Column A x 100):*** 87.54%	***18)Per 990, Percentage of <u>Management & General Expenses Only</u> (Column C / Column A x 100):*** 12.04%	***19)Per 990, Percentage of <u>Management & General Expenses and Fundraising</u> (Column C+D / Column A x 100):*** 0.41%
20)Purpose of Grant Request (one sentence): To support research and development of a suite of innovative tools aimed at improving organ transportation and logistics to get the right organ, to the right person, at the right time			
21)Program Start Date (Month and Year): January 2022		***22)Program End Date (Month and Year):*** June 2023	
23)Gimbel Grants Received: List Year(s) and Award Amount(s) None			

Signatures

24)Board President / Chair: (Print name and Title) Matthew Cooper, MD, Chair	***Signature:***	***Date:*** 11/30/2021
25)Executive Director/President: (Print name and Title) Brian M. Shepard, CEO	***Signature:***	***Date:*** 11/30/2021

2021 S.L. Gimbel Foundation Fund APPLICATION Narrative

Please provide the following information by answering **ALL** questions (I to IV), **12 Font, One Inch Margins, Times New Roman.** Use the format below (I to IV). **Type the question**. Type your complete answers to the question directly below the question. Please be thorough, clear, specific, and concise.

I. Organization Background

A) What are the history, mission and purpose of your organization?

United Network for Organ Sharing (UNOS) is the private, non-profit organization that manages the nation's organ transplant system under contract with the federal government. In doing so, we bring together hundreds of transplant and organ procurement professionals and thousands of volunteers. This unique collaboration helps make life-saving organ transplants possible each day. Our system serves as the model for transplant systems around the world.

From the mid-1950s through the early 1970s, individual transplant hospitals and organ procurement organizations (OPOs) managed all aspects of organ recovery and transplantation. If an organ could not be used at hospitals near the donor, there was no system to find matching candidates elsewhere. Many organs could not be used simply because transplant teams could not locate a compatible recipient in time. As a result, organs were discarded and lives lost. The transplant community knew something had to be done to better allocate these precious gifts.

The South-Eastern Organ Procurement Foundation (SEOPF), an association of donation and transplant professionals, sought to increase the efficiency of organ placement. In 1977, SEOPF established a computerized database for each of its member institutions to list candidates and help them find matches for organs they could not use locally. That database was called the United Network for Organ Sharing. In 1982, SEOPF launched a call center in Richmond, Virginia, to provide personal assistance with organ placement. That service, in continual operation ever since, is now the F. M. Kirby Foundation Organ Center.

By the early 1980s, more transplant hospitals were opening and many more candidates were being accepted for transplantation. The Congress of the United States passed the National Organ Transplant Act (NOTA) in 1984. NOTA called for a national network to coordinate the allocation of organs and collect clinical data about organ donors, transplant candidates, and transplant recipients.

In March of 1984, UNOS was incorporated as an independent, non-profit organization. UNOS was awarded the initial contract in 1986 to develop the requirements for the operation of the Organ Procurement and Transplant Network (OPTN) and has served as the OPTN ever since.

UNOS has grown from a handful of staff members in rented office space to an organization employing more than 400 people at its headquarters in downtown Richmond, Virginia. Its responsibilities have also increased and changed as the field of transplantation has matured. What has not changed is the commitment of UNOS staff to save and improve lives through uniting and supporting the efforts of the transplant community.

Our mission
Unite and strengthen the donation and transplant community to save lives

Our vision
A lifesaving transplant for everyone in need

Our values
Our values guide our behaviors as we pursue our mission and strategic goals:

- Stewardship: We act on behalf of those we serve to manage the resources and gifts entrusted to us, especially the gift of life.
- Unity: We work collaboratively and respectfully, guided by consensus-building, sharing responsibility, time, and abilities.
- Trust: We demonstrate integrity and reliability through consistency, openness, and honesty.
- Excellence: We achieve high quality through measurement, evaluation, and continuous improvement of our standards, processes, and effectiveness.
- Accountability: We take ownership of our actions and fulfill our commitments to our stakeholders and each other.

Strategic goals

- Increase the number of transplants
- Provide equity in access to transplants
- Promote efficiency in donation and transplant
- Promote living donor and transplant recipient safety
- Improve waitlisted patient, living donor and transplant recipient outcome

B) How long has the organization been providing programs and services to the community?
UNOS' roots began as SEOPF, which was founded in 1977 to help the community of donation and transplant professionals make the best possible use of organs to save lives. For more than 35 years, we have played a vital role in the evolution of transplant therapy in the United States. Organ transplant has progressed and the system for matching the organs has evolved, resulting in more than 846,000 transplants since 1988.

C) What are some of your past organizational accomplishments (last three years)?
In 2020, for the tenth year in a row, organ donation from deceased donors in the United States set an all-time record. A total of 12,587 people provided one or more organs to save and enhance the lives of others, representing an increase of six percent over 2019. A record 36,548 organs from deceased donors were transplanted, either individually or in multi-organ combinations. This resulted in 33,309 lifesaving transplants from deceased donors in 2020 – setting another annual record for the eighth consecutive year. Additionally, 34 OPOs set all-time organ donation records in 2020. This occurred despite significant adverse effects from the COVID-19 pandemic, where deceased donor transplantation briefly fell by approximately 50 percent in early April before returning to a more consistent baseline in late May. A total of 5,725 living donor transplants were performed in 2020, bringing the total number of lives saved through transplant in 2020 to more than 39,000 – the second highest annual total.

As the highest-performing organ donation and transplant system in the world, UNOS is focused on equity in access to transplant. In late 2019, UNOS researchers began work on developing a data dashboard that provides transparency about how the OPTN monitors equity in access to transplant. In March 2020, the first iteration of the dashboard went live for liver and kidneys. Through an Access to Transplant Score (ATS) and equity monitoring methodology, the Equity in Access to Transplant

dashboard allows users to explore how different factors impact how long waitlist candidates have to wait to receive a deceased donor transplant. These data can alert UNOS to potential disparities in access to transplant and potential detrimental effects on equity, thus identifying when a policy refinement, communication to the community, or education and awareness are needed.

UNOS Labs, an endeavor by UNOS to research innovation solutions for system-level issues in organ transplantation, began with a single project in 2017, and quickly expanded in mid-2018 to include an entire portfolio of projects. UNOS also invested in the addition of a Data Science team to the organization in 2018, supporting the data science pillar of UNOS Labs along with other corporate goals, and added dedicated staff resources to the UNOS Labs initiatives. Today, UNOS Labs is a robust experimental incubator that brings together data, technology, and industry expertise to test and develop new products and ideas for insights to improve the system.

The projects completed by UNOS Labs are a powerful example of UNOS's commitment to innovating how we analyze, evaluate and continuously improve the national transplant system to save more lives. Designed to address bigger questions in transplantation and capitalize on existing innovations, the following projects (in addition to Organ Tracking, SimUNet^{SM} and Liver Paired Donation detailed throughout this application) have created something that benefits both the system and the patients.

- **Understanding Cold Ischemic Time (CIT):** Time is of the essence when it comes to matching a donated organ and a waitlisted patient. Cold ischemic time (CIT) is the time an organ spends outside the body between procurement and transplantation. It is a critical limiting factor in organ allocation. Each organ has its own CIT limit, ranging from four to six hours for hearts and lungs, up to 24 to 36 hours for kidneys. CIT not only limits how far an organ can travel, but prolonged CIT is also linked with higher rates of organ rejection, post-transplant complications, or donated organs being rendered non-transplantable. To better understand the drivers of CIT, UNOS partnered with OPOs and their couriers to collect key data points in the CIT continuum. Prior to this project, it was assumed that longer distances, and therefore higher transit time, increase CIT. Data collected during this project indicate that transit time is not the primary driver of CIT. It appears that OPO and transplant hospital practices are, in fact, the primary drivers for overall CIT. Our results are important because, regardless of transportation method (i.e. driven vs. flown), there was little correlation between transit time and total CIT, which challenges conventional wisdom that transportation is a primary cause of prolonged CIT in kidney transplantation.

  The project team also partnered with the policy development team to support data collection from transplant hospitals and OPOs to help further understand the various elements of CIT. These data include transplant time and times that an organ is pumped on a perfusion device (used to replicate the conditions inside the body and expand the organ's viability). Combining these data elements would allow us to better understand, on a national scale, the drivers of CIT and identify real opportunities to decrease CIT and improve outcomes for patients nationwide. These findings also support the development of allocation policies that more equitably allocate organs across the country, moving organs further to get them to the most critical patients. This information could also help drive practice changes within OPOs and transplant hospitals that could demonstrably decrease CIT for donated organs. The results of this effort will be published in the Journal for the American Medical Association (JAMA) Network Open in December 2021.

- **Image Sharing:** A key component of organ offer decision making revolves around the availability of diagnostic images. These include images such as raw photos, radiographs,

bronchoscopies, and echocardiograms. In 2018, DonorNet, UNOS' technology platform for offering and accepting donated organs, supported image sharing, but limited by file size and type. High resolution, quality images and several file types used in organ offer evaluation were not supported. The primary method of sharing images was through third party image hosting providers, directly mailing CDs of images, or sometimes even the cursory text message on a personal cell phone or email. These methods were unreliable, costly, incompatible with one another and not always secure. UNOS released a pilot of a secure Image Sharing platform within DonorNet, partnering with Ambra Health, and six OPOs across the country to test a solution that could share high-quality medical images in a consistent, efficient, and safe manner. This was a major integration effort, and pilot sites provided ideas for enhancements and improved functionality. After a successful pilot, the Image Sharing service is now available at no-cost for the transplant community to securely share medical images and improve organ offer decision-making. It is now being used at almost all OPOs across the United States and will soon complete national rollout.

D) What are your key programs and activities?

UNOS is involved in many aspects of the organ transplant and donation process. There are key activities we fulfill through the OPTN in contract with the federal government. These deliverables are not maintained through philanthropic efforts, and include the following:

- Managing the national transplant waiting list, matching donors to recipients 24 hours a day, 365 days a year.
- Maintaining the database that contains all organ transplant data for every transplant event that occurs in the U.S.
- Bringing together the transplant community to develop policies that make the best use of the limited supply of organs and give all patients a fair chance at receiving the organ they need, regardless of age, sex, ethnicity, religion, lifestyle or financial/social status.
- Monitoring every organ match to ensure organ allocation policies are followed.
- Educating transplant professionals about their important role in the donation and transplant processes.

Some activities are supported by both philanthropic efforts of UNOS and the OPTN contract, including:

- Providing assistance to patients, family members and friends.
- Educating the public about the importance of organ donation.

The work involved in fulfilling the OPTN contract, while vital, does not provide for much needed support of innovations. UNOS recognized this as an opportunity to invest in technology enhancements and research to improve upon the system. As a result, we have developed cutting edge programs, projects, research, and activities which are supported by private foundations, other sources of revenue, and fundraising activities. The following programs and projects are all exclusively UNOS private activities, not supported by any federal funding.

UNOS Labs

UNOS Labs leverages three research pillars – data science, technology innovations, and behavioral science – to advance its mission by pursuing transformational ideas to improve transplantation. UNOS Labs' diverse project portfolio seeks to increase organ offer acceptance and create high-impact efficiencies by applying unique research methods in collaboration with the transplant and broader scientific communities.

UNOS Labs explores high-risk ventures to discover and eliminate barriers to organ donation and transplantation. While many of these initiatives are developed and utilized to strengthen the organ sharing system, some projects result in the development of innovative products that are marketed and used by the transplant communities, resulting in earned income for UNOS. Across all facets of UNOS Labs, we pursue solutions to the complex challenges existing within the transplantation system including organ transportation and logistics (as addressed in our Statement of Need), clinical decision-making, and increasing the number of transplants. Projects addressing these issues include:

- **Liver Paired Donation:** Since its introduction in the United States in 2000, living kidney paired donation (KPD) and transplantation has provided increased transplant options for patients who have interested living donors that are incompatible for transplant. Though the living donor may not be compatible due to blood type or other factors, they may be compatible with another waitlisted patient, beginning an exchange to ensure both waitlisted patients are transplanted. The success of these programs has prompted the liver transplant community to consider the possibility of liver paired donation (LPD). The liver regenerates, and is the only other organ besides kidneys that can be donated by a living donor. The potential indications for LPD would be to overcome blood type incompatibility, size mismatch, or anatomical differences that might prevent a living donor from donating to their loved one. UNOS launched a pilot for the nation's first LPD program in September 2021, collaborating with high-performing transplant hospitals across the country to make more transplantable livers available and increased numbers of lifesaving transplants. The program also reduces financial barriers for individuals who are interested in living donation, specifically reimbursing non-medical expenses and lost wages, and offering a donation-related supplemental catastrophic event and life insurance policy.

- **SimUNet^{SM}:** This research platform uses behavioral science to gain insights into the organ offer process, allowing for experimental modifications to organ offers to understand their impact on acceptance behavior. The platform simulates UNOS' UNet^{SM} organ offer system, recording, tracking, and evaluating organ transplant decision-making. While UNOS designed the platform originally for kidney studies, a community need for similar insights into liver and heart acceptance practices is driving expansion to other organs.
    - As of September 2020, UNOS has completed four research studies using SimUNet^{SM}, including participants from 130 separate kidney programs and 243 individual nephrologists/kidney surgeons and two additional projects are scheduled for 2021.
    - UNOS has also been the subawardee on federal grants with academic and clinical research partners to support the outcomes of their research with behavioral studies.

- **Transplant-Vision (Tx-Vx):** During the process of offering an organ for transplant, images of the organ are shared to assist with the decision-making process. Transplant professionals use these images to observe various qualities of an organ that aren't identified through lab work or tests, but purely through observation. However, there are no standards for taking these procurement photos. Inconsistency with positioning, measurement, lighting, and other factors can negatively impact organ offer acceptance. The UNOS data science team is working on Transplant-Vision, or Tx-Vx, to simplify and standardize these images using image processing and augmented reality. Tx-Vx will use the smart phone's camera to analyze the procurement scene in real time, judging quality and content. Tx-Vx will provide the procurement specialist with recommendations to improve the photo, and areas of interest that should be annotated for decision-makers (e.g. discoloration, cysts, etc.). Additionally, Tx-Vx will utilize augmented reality-driven spatial localization to measure the organ and orient annotations, enabling reliable organ and abnormality measurements. Tx-Vx will then upload an annotated image into the

organ offer system including the spatial mapping information. The process eliminates error-prone steps during the time-critical period of organ allocation and standardizes procurement photo data for retrospective research.

- **Increasing Use of Perfusion:** Perfusion is a rapidly expanding technology that allows an organ to be kept outside of the body for longer periods of time while still being healthy enough to transplant. Traditionally, organs are limited by cold ischemic time (CIT). Perfusion, in essence, replicates the conditions inside the body, such as temperature, oxygen, and nutrients, and allows it to function similarly to how it does inside the body, expanding the organ's viability. However, the novelty if this emerging technology results in an overall lack of adoption of perfusion in transplant. UNOS has created a task force to evaluate system-level technology solutions to increase the use of perfusion. Through focus groups and interviews of procurement experts, transplant professionals, and perfusion companies, UNOS will identify and develop technology solutions for the key barriers to adoption. This effort will increase the use of perfusion and therefore make organs more readily available for transplant regardless of challenges in timing or logistics.

- **Referral of Patients for Transplant (RPTR) Tool:** More than one in seven people in the United States suffer from kidney disease, and the primary forms of treatment are dialysis and kidney transplant. A wide network of healthcare providers care for patients with end stage renal disease (ESRD), including nephrologists, dialysis providers, nutritionists, patient care coordinators, and others. These ESRD Seamless Care Organizations (ESCOs) seek to provide the best care for their patients, including helping them get on the transplant waiting list. However, there is currently no visibility for these providers once a patient has been referred to transplant, to see whether the patient was listed or what their current status is on the waitlist. UNOS seeks to fill this gap by providing access to this information for ESCOs through the Referral of Patients for Transplant (RPTR) tool. Challenges of verifying provider and patient identities and then linking this with waitlist data make this a difficult problem to solve, but UNOS plans to assist in continuity of care by not only providing waitlist status in a secure format, but also providing useful predictive analytics to help providers improve patients' access to transplant. A future state of this effort is to provide this same information directly to patients, giving them increased health awareness, and providing the tools necessary for ESRD patients to navigate the transplant referral system and increase their ability to advocate for themselves.

E) Describe the communities you serve. Include populations, geographic locations served, and relevant statistics.

UNOS touches the lives of everyone in the United States impacted by end stage organ failure, organ donation and transplantation. UNOS serves transplant and organ procurement professionals, as well as individuals on the waiting list or those who have already received an organ transplant, living organ donors, and the families of deceased donors to make the best use of the gift of life. This includes donors and recipients of the following organs: liver, kidney, pancreas, kidney/pancreas at the same time, heart, lung, heart/lung at the same time, intestine, and vascularized composite allografts (VCA) such as face and hand transplantation. See below for a breakdown of transplants, donors and waitlist additions by organ for calendar year 2021 through November 19, 2021.

Organ	Transplants	Donors Recovered	Waitlist Additions
Kidney	22,823	16,818	39,007
Liver	8,234	8,901	12,420
Heart	3,417	3,466	4,507
Lung	2,282	2,340	2,772
Pancreas	879	1,179	1,748
Intestine	82	81	133
VCA	4	4	7

Contributions toward this lifesaving work and the innovative efforts of UNOS Labs benefit a patient population that spans the entire United States. End stage organ failure, organ donation, and transplantation affect all ages, genders, and races/ethnicities of the population. There is no standard age limit or cut off to receiving a transplant; each transplant hospital has its own specific criteria for accepting transplant candidates. People of all ages and medical histories should consider themselves potential donors; donors are needed for all races and ethnic groups. Transplant success rates increase when organs are matched between members of the same ethnic background.

COVID-19 Impact
In some candidates with severe cases of COVID-19, lasting damage to the lungs is being treated with lung transplantation. To capture the impact COVID-19 has on lung and heart candidates in the U.S., the OPTN added a set of COVID-19 diagnoses to UNet^{SM} in October 2020. There were over 230 lung transplants performed in the U.S. between August 2020 and October 2021 where primary lung diagnosis is COVID-related, with dramatic increases seen in spring 2021.

II. Project Information:

A) <u>Statement of Need</u>

1. Specify the community need(s) you want to address and are seeking funds for.

While the number of lifesaving transplants performed in the U.S. since UNOS' inception is nearing one million, 20 people still die every day waiting for a second chance at life. Despite the miraculous success of transplantation, and the remarkable results, there are still more lives at stake and more ways to continuously improve the transplant system. Today 106,738 children, women, and men are waiting for a lifesaving organ. Their very lives depend upon an innovative, strong and efficient transplant system to find and match them to a donated organ.

The Procurement and Match Process

Organ donation and transplantation is a complex process, requiring the expertise and collaboration of thousands across the country every day. The National Organ Transplant Act of 1984 established the Organ Procurement and Transplantation Network (OPTN), for matching donor organs to waiting recipients. The OPTN is managed by UNOS, and all 57 OPOs across the country use UNOS' proprietary computer system to match and place the organs that they procure. UNOS provides tools, resources, and expertise to help OPOs improve the quality of service they provide, in order to achieve our joint goal of placing donated organs equitably and efficiently to save more lives.

In the case of both living and deceased donors, vital information including blood type, height, weight, and zip code are entered into UNet^{SM}, UNOS' secure web-based transplant platform linking all OPOs and transplant hospitals, which then initiates the matching process with potential recipients. UNet^{SM} is accessible to the transplant community 24 hours a day, seven days a week, with organ placement specialists in the UNOS Organ Center available around the clock to answer questions and assist with organ placement.

Transplant hospitals evaluate extensive medical testing as well as a patient's mental health and social support system to determine whether or not to add a patient to the national waiting list that UNOS manages. When a transplant hospital accepts a patient as a transplant candidate, it enters medical data such as the person's blood type and medical urgency into UNet^{SM}.

Each time an organ becomes available, using organ-specific allocation algorithms derived from OPTN allocation policies and the combination of donor and candidate information, UNet^{SM} generates a match run, a rank-order list of candidates to be offered each organ. The candidates who appear highest in the ranking are those who are in most urgent need of the transplant, and/or those most likely to have the best chance of survival if transplanted. Patients' transplant physicians may accept or decline organ offers based on cold ischemic time (CIT), the donor's age or medical history and many other factors. For every successful match, the OPO facilitates authorization, testing, the recovery of donor organs and delivery to the transplant hospital.

Improving Organ Transportation Logistics

Despite the lifesaving work of the transplant system, there is no single national transportation system to move donated organs to transplant hospitals. Transplantation is a complex network of transplant professionals, recovery hospitals, OPOs and UNOS, and moving organs results in many logistical challenges.

Organs with longer cold ischemic time (CIT, or time outside of the body), such as kidneys, often rely on the inconsistent commercial flight system. This is challenged by delayed flights, missed connections, or the rare but terrible circumstance when an organ is not loaded onto the flight. In addition, organs are moved on commercial flights through the cargo system. In cargo, the ability to add an organ to a flight is reliant on an open cargo office, and these "cargo hours" differ by airline, by airport, and can change without notice. The arrival of an organ to a closed cargo office means it cannot be loaded onto the flight or picked up by a courier, resulting in organs accruing potentially dangerous CIT with no remedy but to wait. Understanding the impact of these issues is further complicated by the fact that each OPO and transplant hospital is responsible for obtaining its own travel solutions, and in doing so, there is no centralized method to collect data about delays or to identify best practices and process efficiencies.

In contrast to kidneys, organs with greater time limitations such as livers, lungs, and hearts often move via charter flight. Though more reliable and controlled than the commercial flight system, charter flights have their own unique challenges. One such problem is that OPOs and transplant hospitals, responsible for their own transportation solutions, rely on their own established relationships with couriers and charter providers. The search for a charter flight includes calling multiple trusted companies, checking plane availability, finding pilots with available flight hours who are also available when the organ will be ready to move, and negotiating rates independently. This is a very manual process, and there is no transparency into the costs of charter flights, so there is no accountability to keep costs low. These greater expenses create a financial strain for transplantation that trickles down to patients, especially as we seek to share organs more broadly with the sickest patients.

In addition, without real time tracking, it is difficult to identify the terrible circumstance of an organ missing a flight connection or being left behind at an airport. Retroactive analysis of organ transportation between 2014 and 2019 found nearly 170 organs could not be transplanted and almost 370 endured "near misses," with delays of two hours or more, after transportation problems. Overall, about 7% of shipments handled by UNOS from July 2014 to November 2019 encountered transportation problems. While these tragic set backs are not common and the vast majority are attributed to commercial airlines or logistics providers, a mistake like losing an organ means someone

might lose their life. In response, UNOS is integrating organ tracking technology to ensure that the precious gifts of life entrusted to us by selfless organ donors get to the right patient at the right time.

Over the course of 18 months, beginning in January 2020, UNOS Labs piloted and subsequently released the Organ Tracking Service integrated into TransNet, our proprietary system for packaging and labeling organs. Partnering with tracking provider GEGO, Inc., this solution provides visibility into where organs are in transit and notifications about key milestones, including if an organ is still at an airport after the scheduled flight has taken off. Also in 2020-21, UNOS Labs tested the Travel App, an Expedia-like system designed specifically for the needs of organ transplant, to identify all available travel options. However, there is much more to do to make us the best stewards of the gift of life.

UNOS has several projects in flight to address these varied issues with organ transportation and logistics. Improved logistics systems and technologies, which UNOS is best positioned to provide in a centralized way, will make getting the right organ to the right patient as timely and efficiently as possible. It will also help collect the data necessary to identify additional improvements to the system and understand how our efforts make the system better. The Gimbel Foundation's support for this portfolio of work will strengthen the U.S. organ transplantation system by decreasing logistical barriers, increasing transparency, and making certain that every organ arrives where it needs to at the right time for transplantation.

Proven Success

Before organ tracking, there was no way to know where an organ in transit was at any given time. Here is just one example how these applications and the new system are saving lives:

> *The UNOS F.M. Kirby Foundation Organ Center (OC) staff are onsite 24-hours a day, 365 days a year. They played a key role in the pilot phase by keeping track of organs in transit and testing the new technology. As an OC staff was routinely following the progress of a kidney, they noticed the courier was heading in the wrong direction and the flight to deliver the organ was leaving in 40 minutes. The OC staff immediately called the courier, "Hello, I am with the UNOS Organ Center. I see that you are heading in the wrong direction from your route to the airport to deliver a life-saving kidney. Are you aware of this?" The courier was unaware of the precious cargo they carried and they were headed to pick up another package. They immediately turned around – something the OC staff could see in real time – and headed straight to the airport. The courier made it and got the organ on the plane right before the doors closed, literally saving a life!*

B) <u>Project Description</u>

1. Describe your project. How does your project meet the community need?

UNOS is committed to honoring and protecting the precious gift of life. Our UNet^{SM} system collects data on donors and patients awaiting a transplant, and uses an algorithm to match organs to patients in the safest and secure method possible. TransNet, within UNet^{SM}, is a system created to package and label organs for transportation to ensure that the right organ goes to the right patient. A diverse and highly informed network of staff and professional volunteers create and analyze the policies that drive organ allocation for clinical relevance, equity and fairness. However, logistics – moving the organ from recovery hospital to transplant hospital – is an opaque space. UNOS aspires to create a robust and advanced transportation and logistics toolkit in which zero organs are discarded due to transportation issues. Two key efforts, the modernization of our Organ Tracking solution with better technology and transparency, and the deployment of a Travel App to quickly put route options and estimated times of arrival in the hands of the OPOs, promise to help us reach this goal. With the support of the Gimbel

Foundation, together we can bring these projects to life and ensure that every donated organ reaches the right recipient and at the right time.

Improved Organ Tracking

The Organ Tracking service is currently a paid subscription for OPOs to have access to GEGO, Inc. trackers and the integrated solution which provides tracking maps, shipment functions, notifications, dashboards and metrics for quality improvement. However, UNOS and GEGO recognize that beyond the services provided in the subscription, additional development is necessary to customize the tracking technology specifically for the needs of transplant.

Since the release of Organ Tracking as a subscription in June 2021, UNOS and GEGO have collaborated to improve the offering. Small updates to features and views in the GEGO website have made tracking information more clear. UNOS developed a device inventory dashboard which provides OPOs the ability to view all of their trackers in one visual dashboard along with battery life, last shipment information, and more. Also released was a report which identifies usage of trackers per organ type, helping an OPO identify ways to improve utilization of the technology. UNOS is currently working with GEGO to update timestamps in the GEGO platform to Eastern Standard Time instead of the current Universal Time, making it more useful to OPOs and transplant hospitals, and to incorporate organ information and a donor-specific identification number in notifications. Another upcoming report, which will be made available to transplant hospitals, will inform hospitals of which trackers have entered their facility and which have been returned. This should help improve the return rate of these reusable trackers. Even with all of these updates, the technology and platform itself needs modernization to ensure that zero organs are ever left behind or are discarded due to transportation problems.

GEGO plans to replace our existing tracking solution with RTOMS 2.0 (Real-Time Organ Monitoring System). With more than 1,000 transplantable organs being tracked over the course of this partnership to over 130 transplant hospitals across the United States, UNOS and GEGO propose the development of a more sophisticated RTOMS with the goal of providing OPOs with the most reliable, efficient, and user-friendly solution for tracking organs in transit. To achieve this, there are several areas we propose to enhance with the Organ Tracking solution:

- Network Coverage: There are two primary types of tracking technology – Global Positioning System (GPS) and Internet of Things (IoT) – which have different strengths and weaknesses. Our current tracking devices are IoT, meaning that they rely on the cellular network and WiFi to communicate tracking information to the cloud. AT&T, Verizon and other companies are constantly investing in their networks, upgrading them for better connectivity. GEGO plans to upgrade the tracking units to use the latest available technologies – GPS and IoT combined - for better connectivity, battery life, and higher location accuracy across the USA. Adding GPS will also allow for real-time speed monitoring, and direction of movement calculation to ensure best possible tracking.
- Improved Notifications: Due to the upgraded tracking technology, devices will be capable of more frequent and accurate location reports, which also allows automated alerts that the RTOMS 2.0 will be able to push when things don't go as planned in transit. Currently, the system has 4 key notifications that it sends: departure, arrival at an airport, arrival at the destination, and if a flight took off but the tracker is still showing as on the ground – meaning an organ was left behind. Developing four more "critical" notifications would increase the notifications possible from the system beyond simply key milestones. These notifications to OPOs and transplant hospitals will include:

    - When an organ leaves the origin, it will indicate how long it should take to reach the next airport or final destination.
    - Rate of speed in real time when traveling via ground transport (with updates up to 1 minute).
    - The utilization of machine learning to detect outliers in any delay during a shipment, and give immediate notice to the OPOs. This could include sudden decreases in speed (traffic, car accident) or significant change in route from destination (wrong turn).
    - Double confirmation of delivery, expanding beyond a notification when the organ arrives at the destination but allowing for a manual confirmation of delivery by someone at the transplant hospital.
- User Experience: A complete overhaul of the current user interface and experience (UI and UX) is also planned. Working with the latest design thinking methodologies, our OPOs will help to design a very user friendly and beautiful UI for the user facing portal. It will also be a responsive design, adapting to the different devices that users have.

Better Commercial Options and Improved Decision-Making

UNOS launched a Travel App in November 2020, an Expedia-like tool which identifies all possible routes for organ transport between an origin and a destination. It takes into account commercial flight options through a flight database called OAG Aviation Worldwide and driving time from Microsoft Azure Maps to provide the most efficient routes to deliver an organ. The Travel App informs OPOs of a more accurate estimated time of arrival in the recipient center's time zone, allowing transplant hospitals to better prepare their recipient so that CIT is kept to a minimum. It also provides links to cargo hours for each specific airline and airport, allowing for easier in-the-moment decision-making and fewer time-consuming searches in other places when time is critical.

The Travel App has been tested by the UNOS F.M. Kirby Foundation Organ Center, which is responsible for placing some of the most difficult-to-place organ offers, and select OPOs to identify ways to improve the application. OPO users who tested the Travel App indicated that it was most useful in two scenarios: 1) guiding discussions with couriers, as OPOs had travel options at their fingertips and weren't relying on solely the courier's recommendation; and 2) talking with transplant hospitals who were evaluating a particular organ offer, to be able to report an estimated time they could have the organ at the hospital for transplant. One OPO reported that because of the Travel App's capabilities, they were able to find an earlier flight out than what their courier told them was available. This resulted in saving nine hours of CIT on a kidney, meaning that the organ was healthier and more viable for the patient. Because of that time savings, someone is going to have much better long-term outcomes post-transplant.

Due to feedback from our partners, UNOS plans to integrate the Travel App into the organ offer system to help OPOs and transplant hospitals make decisions based on when an organ can arrive for transplant, and if this is within the ideal window for CIT. The organ offer evaluation process is complex and multifaceted, but alongside all of the clinical factors, logistics are often a key component of acceptance or decline. OPOs seeking to provide an evaluating transplant hospital with an estimated time of arrival (ETA) often have to call a courier or visit multiple third-party websites, wait for an ETA, and call the hospital back with an update. If the hospital wants other options, or insists on an earlier delivery, the OPO must start over. This "swivel chair" of sources eats away at precious time, and can result in an organ being refused or even eventually discarded. Simply making this process more efficient has the ability to greatly impact organ offer decision-making. UNOS will display the next flight out information and estimated time of arrival ETA within DonorNet, which is part of the organ offer system, at the time the organ is offered for a patient, avoiding the "swivel chair" effect. Decreasing the offer evaluation time in turn decreases overall CIT accumulated on the organ,

improving outcomes for the patient. Having that logistics information up front will inform decision-making and increase acceptance of offers overall.

There are also UX enhancements recommended by the pilot OPOs that will make usability and function of the Travel App much better for users. These include streamlining the interface, highlighting easy-to-miss features, and improving search functions. Additional features will be incorporated into the interface as well, including the addition of custom locations in the origin/destination selections, promotion of "recently used" locations in the drop-down menu, smarter configuration that will expand travel solutions to nearby cities instead of just airports within a certain distance, and a calculation of CIT alongside the estimated time of arrival.

Access to Charter Flights

Charter flight availability and costs has long been a challenge for transplantation. However, UNOS plans to bring well-tested technology in other on-demand cargo fields to the transplant system to improve transparency, drive down costs and increase flight options. UNOS is engaging a charter planning partner, Ascent on Demand, to develop and integrate a solution called a bid board. The bid board, commonly used to book charter flights to deliver on-demand parts in automotive and aerospace manufacturing, allows charter providers to competitively and transparently bid on transports. The user, or in the case of organs, the OPO or transplant hospital, submits the parameters for their transport needs – including number of passengers, a required time of departure and/or a required time for arrival. This job is pushed to all qualifying charter companies who, if they have an available plane and pilot, bid openly in a portal for the job. Bids are assembled together in a single screen, alongside a Green-Yellow-Red rating system based on the company's historical reliability and on-time service, and the OPO or transplant hospital can review choices and select a flight. This model has been proven to drive down costs and increase safety and efficiency of cargo-related charters, and we will work with the Ascent on Demand team to develop a bid board specifically designed for transplantation. They are willing to adapt their existing model to our needs to made organ transportation as effective as possible, to bring the system costs down and ensure that no time-critical organ is left without an option to get to a patient in need.

UNOS is leading strategic projects designed to address the challenges of logistics involved with organ transplantation and save more people with the gift of life. Projects within the full breadth of organ tracking, transportation and logistics are already underway, but there is much still to do to close the gap and ensure that no organs are ever discarded due to transportation issues. UNOS' contribution towards the next phases of this project will include updates to reporting and dashboards for OPOs. Mentioned above, this includes updating the timestamps in the GEGO platform and incorporating organ information and a donor-specific identification number in notifications. UNOS will also put its resources towards creating a report for transplant hospitals showing them which trackers have entered their facility and which have been returned. Our request of the Gimbel Foundation is to support the Organ Tracking modernization and the Travel App search function integrated in the offer system. It is our hope, that the Foundation will consider a future phase of this solution, the creation of a Bid Board to create a highly effective, valuable suite of tools that will transform organ travel and logistics.

2. What is unique and innovative about this project?

UNOS is implementing existing, and proven, tracking technologies and bringing best practices from industry experts to create a customized solution for the singular needs and unique challenges of organ transportation and logistics. Transporting organs is far more sophisticated and complex compared to transporting goods, and the solution needs to not only ensure the safety of the organ but provide ease of use, and time-saving tools for the individuals working around the clock to find the right

transportation for a precious donated organ. With these building blocks, we are saving more lives faster and ultimately reducing CIT, thus helping to improve patient outcomes post-transplant.

This project brings together a suite of initiatives, subject matter experts, and community collaborators to solve the biggest logistical problems facing organ transplantation. UNOS is home to the experts in the organ transplantation system, and brings that depth of knowledge to creating solutions that can be implemented system-wide. UNOS is also uniquely positioned to integrate initiatives in a way that make them easier to adopt for OPOs and transplant hospitals, and to bring together transplant experts in focus groups, pilot testing, and other forums to get their input on how to build solutions that will meet their needs. In addition, these projects engage true subject matter experts in logistics and transportation to ensure that from a technology perspective, we are bringing innovative and transformational solutions to transplant and can continue to stay on the cutting-edge of any tool, product or service released to the community.

C) Project Goal, Objective, Activities and Expected Outcome

1. **Note: Objective, Outcome and Evaluation must all be based on the SAME QUANTIFIABLE CRITERIA (for example, "number served, or acres improved"). This quantifiable criteria should refer to the grant amount you are requesting from the Gimbel Foundation only and not the total program.**

State ONE GOAL, ONE OBJECTIVE, ONE OUTCOME. USE NUMBERS AND DO NOT USE PERCENTAGES.

2. **State ONE project goal. The Goal should be an aspirational statement, a broad statement of purpose for the project.**
3. **State One Objective**. The Objective should be specific, measurable, verifiable, action-oriented, realistic, and time-specific statement intended to guide your organization's activities toward achieving the goal. **Specify the activities** you will undertake to meet the objective and number of participants for each activity.
4. **State One Outcome.** An outcome is the individual, organizational or community-level change that can reasonably occur during the grant period as a result of the proposed activities or services. What is the key anticipated outcome of the project and impact on participants? State in a quantifiable and verifiable term.
5. **Evaluation:** How will progress towards the objective (per above) be tracked and outcome measured?

   Provide specific information on how many individuals will be evaluated (should be the same number as in the objective), how you will collect relevant data and statistics that meet your objective and validate your expected outcome, in a quantifiable manner, as you describe your evaluation process.

BELOW IS AN EXAMPLE OF GOAL, OBJECTIVE, OUTCOME AND EVALUATION: Objective, Outcome and Evaluation should align and should be written in a linear format, using actual numbers, and data that are quantifiable and verifiable. Do not use percentages)

STATE THE GOAL, OBJECTIVES, AND OUTCOME

GOAL: House all homeless youth ages 18-24 in Mariposa County who are physically, mentally and legally able to work within 24 hours and help them become sufficient in 90 days.

OBJECTIVE: House up to 145 homeless youth referred or who contact us within 24 hours.

ACTIVITIES:

1. For each of 145 youth identified, develop a case management file.
2. Create a 90 day sufficiency action plan for each of the 145 youth.

3. Input weekly progress reports for each of the 145 youth.
OUTCOME: We expect to provide rapid rehousing to over 145 homeless youth in 2020.
EVALUATION: Using Build Futures' Salesforce data base client management and tracking system, generate reports on the number of clients served and housed. Track our role in housing 145 youth. Account for additional successes or lower numbers of youth in the program.

WRITE YOUR RESPONSES HERE AND Use the following format for your goal, objective, respective activities and expected outcome:

GOAL: Zero donated organs discarded due to transportation issues. Develop and release a series of logistics tools and enhancements to ensure maximum efficiency and transparency into organs moving across the United States for transplantation.
OBJECTIVE: **Upgrade 410 tracking devices with enhanced tracking technology, develop and release RTOMS 2.0 tracking system with improved user experience, increase from 4 to 8 shipment status notification types by December 2022, and improve efficiency of organ offer evaluation for Travel App users by an average estimated 30 – 45 minutes by March 2023.**
ACTIVITIES:

1. Complete development and testing of next-generation tracker, using GPS and IoT technology combined, and replace 410 existing IoT-only devices by September 30, 2022.
2. **Redesign existing RTOMS UNOS portal on GEGO, Inc. site to RTOMS 2.0 through analysis of user interactions and human-centered design, including doubling the number of notifications (from four to eight) available to the OPO and transplant hospital, by December 31, 2022.**
3. **Test and evaluate the integrated Travel App feature with five OPOs by March 31, 2023.**

OUTCOME: **We expect to upgrade 410 tracking devices to enhanced tracking technology resulting in more accurate and reliable location data. We will develop and release the RTOMS 2.0 tracking system for an improved user experience and an increase from 4 to 8 shipment status notification types. This will lead to zero tracked organs being lost or discarded due to transportation issues in 2022 in the updated user-friendly system. We anticipate that the integrated Travel App will improve efficiency of organ offer evaluation for its users by an average estimated 30 - 45 minutes, thus decreasing an organ's overall CIT at the time of transplant.**
EVALUATION: **Use project management methods to track and report progress on the upgrade of 410 tracking devices and the development and release of the updated RTOMS 2.0 tracking system, including the increase from 4 to 8 shipment status notification types. Use customer feedback surveys and regular feedback meetings to quantify value-add of organ tracking RTOMS 2.0 compared to RTOMS 1.0. Track time from organ offer to organ offer decision and from initial offer to final acceptance or discard before and after Travel App launch to determine efficiency gains and track progress towards goal of an average estimated 30 – 45 minutes saved. Identify number of instances where organ tracking made demonstrable impact on organ transportation. Record tracking data for all organs using the 410 GPS devices in the UNOS database. Collect OPO pilot feedback on visibility of Travel App in DonorNet.**

D) Timeline

Provide a timeline for implementing the project. The start date and end date should be the same dates on the cover page.
The program start date is: January 1, 2022
The program end date is: June 30, 2023
Include timeframes for specific activities, as appropriate.

- January-February 2022: GEGO to assemble project team to develop RTOMS 2.0, update existing notifications to include donor identification number and organ information. UNOS release transplant hospital report.
- March-May 2022: Redesign UX of GEGO system for RTOMS 2.0
- May-July 2022: Review and improve RTOMS 2.0 portal architecture
- July-September 2022: Integrate new device hardware into RTOMS 2.0. Develop, test and release new features and notifications in RTOMS 2.0. Replace IoT tracking devices with newly released next-generation devices. UNOS kickoff 6-month integration effort of Travel App into DonorNet.
- October-December 2022: Test final RTOMS 2.0 system, train OPOs and deploy to all users.
- March 2023-June 2023: Test integrated Travel App with OPO users and release to the broader community.

E) Target Population

1. Who will this grant serve?

The proposed grant will serve the entire transplant community – individuals on the waiting list, transplant recipients, living organ donors, families of deceased donors, OPOs, and transplant hospitals, and those involved in organ transportation and logistics, including organ recovery and transport teams, OC staff, transport and logistics professionals, airlines, and couriers. Ultimately, contributions toward this lifesaving work and the innovative efforts of UNOS Labs benefit a patient population that spans the entire United States.

2. How many people will be impacted? Provide a breakdown: Number of Children, Youth, Adults, Seniors, Animals.

The proposed project has the potential to impact every American touched by end stage organ failure, organ donation, and transplantation. There are currently 106,738 individuals on the waitlist for organ transplant, with over 34,000 transplants successfully completed thus far in 2021. This is on par with the number of transplants completed in 2020 at 39,036.

It is anticipated that the number of individuals impacted during the grant period will align with those impacted in the previous 2 years.

	Current Waitlist	Transplants to date in 2021	Transplants in 2020	Average % Represented
Children/Youth (17 and under)	1,884	1,585	1,766	4%
Adults (18-64)	78,038	25,696	28,579	73%
Seniors (65+)	26,816	7,485	8,691	23%
Animals	N/A	N/A	N/A	N/A
TOTAL	106,738	34,766	39,036	

F) Projects in the Community

1. How does this program relate to other existing programs in the community?

UNOS is the only organization of its kind in the United States, and is the sole holder of the OPTN contract. Furthermore, UNOS Labs is the only research center of its kind that brings together data, technology innovations, behavioral research and industry expertise to test transformational ideas and hypotheses for improving the transplant system. Though there are many couriers providing varied levels of service to the transplant community, there are no entities working on an overarching portfolio to solve the biggest problems in organ transportation and logistics.

2. Who are your community partners (if any)?

There are a wide variety of collaborators involved in these UNOS Labs projects. The ideas for improvement to the Organ Tracking solution came directly from the 14 OPOs involved in the pilot, and we are working with our tracking partner, GEGO Inc., to shape and create the RTOMS 2.0. The Travel App enhancements were informed by two OPO pilot sites as well as staff at the UNOS F.M. Kirby Organ Center. We will engage additional partners to test developments to the platform, and ongoing collaboration with Microsoft and OAG Aviation make the application possible. The charter bid board relies on a collaboration with industry leader Ascent on Demand to develop, test and roll out the solution across transplantation. The work of UNOS Labs has been supported financially by several other foundations interested in our life-saving work including the F. M. Kirby Foundation, the Wawa Foundation, Fresenius Medical Foundation, the Richard S. Reynolds Foundation, the Titmus Foundation, and the Massey Foundation.

3. Who else in the community is providing this service or has a similar project?

There are other companies providing tracking solutions, including independent tracking companies as well as transplant-specific providers such as MediGo and Airspace. However, none provide the system integration that makes our organ tracking solution so unique, and makes ours the only system that is built into existing organ packaging workflows and processes. There are no other companies to our knowledge creating a similar self-service function to the Travel App or that are investigating the release of a transplant-specific bid board.

4. How are you utilizing volunteers?

UNOS Ambassadors are UNOS community volunteers and advocates raising awareness and educating the public about organ donation and transplantation, organ matching and how UNOS runs the nation's transplant system. Many UNOS Ambassadors have a direct connection to organ donation or transplantation including: waitlist candidates, transplant recipients, donor family members, living donors, caregivers and/or registered organ donors. The UNOS Ambassador program provides tools, tips, and resources to help volunteers spread awareness of UNOS' lifesaving mission.

Nearly 400 people volunteer each year on an OPTN committee or the board of directors. The OPTN particularly seeks volunteers who are not donation or transplant professionals but who have personal experience as a transplant candidate, recipient or patient family member, a living donor, or a donor family member. The OPTN also seeks professionals representing the many disciplines involved in donation and transplantation including IT, law, finance and governance. Most of these volunteers serve a two- to three-year term.

Additionally, UNOS recruits volunteers from its member community made up of transplant hospitals, OPOs, histocompatibility labs, donor hospitals and countless other organizations and individuals. Expert volunteer opportunities include: organ review board; IT customer council; Membership and Professional Standards on-site peer review; collaborative improvement expert council; Associate Regional Councilor; research think tank; research clinical expert group; collaborative improvement faculty; and education subject matter expert.

G) <u>Use of Grant Funds</u>

How will you use the grant funds? This answer should align with the specific activities previously outlined in C) <u>Project Goal, Objectives, Activities and Expected Outcomes</u>

Grant funds will be used for several specific functions.

1. To cover the development, testing, and implementation costs of the RTOMS 2.0.
2. Support final stages of development of the next-generation tracking device.

3. To support API costs incurred to assemble itinerary options within the Travel App.
4. Programming, testing, research support, and project management for the integration of the Travel App data within DonorNet.
5. In year two, we would appreciate the Foundation's consideration for support for the development and roll-out of the Bid Board.

III. Project Future

A) Sustainability

Explain how you will support this program after the grant performance period. Include plans for fundraising or increasing financial support designated for the program.

A portion of all UNOS Labs projects are funded by the UNOS budget, to reflect organizational priority, co-investment with other supporters, and to ensure that projects at least complete the proof of concept phase. Since the beginning of the formation of the suite of organ tracking and logistics projects, UNOS has invested in excess of $200,000 towards multiple initiatives under this service. Future growth of the project, and the speed at which the project is completed, is contingent on the balance between organizational contribution and other budgetary constraints without philanthropic gifts. Since 2018, UNOS has invested over $1.1 million to support UNOS Labs and raised approximately $800,000 in philanthropic support.

Following the full research and development cycle supported by philanthropic efforts, the Organ Tracking Program will be fully sustainable by offering it as a fee for service to OPOs and transplant hospitals.

IV. Governance, Executive Leadership and Key Personnel/Staff Qualifications

A) Governance

1. Describe your board of directors and the role it plays in the organization.

UNOS is led by a 42 member Board of Directors, which oversees management of the organization and provides fiduciary oversight for the organization in carrying out its mission, to include UNOS' obligation in serving as the OPTN. UNOS board members are elected by a national vote of the entire membership and serve as volunteers without compensation. The Board policy requires a composition of approximately 50% transplant surgeons and physicians, with diversity of expertise by organ type along with infectious disease and pediatrics, and 25% patient and donor affairs representatives, which includes organ transplant recipients, living donors, donor families, and recipient families. It is the Board's standing practice to include: at least two OPO representatives, at least two histocompatibility representatives, at least two transplant coordinators, and additional positions for transplant administrators and other transplant/donation professionals. The positions mentioned also include regional representatives from all 11 OPTN regions and nominees from medical/professional societies.

UNOS' corporate governance policies are outlined in a series of documents adopted by the board and reviewed periodically to ensure they continue to meet the needs of the organization and reflect current industry best practices. The Board adopts a three year strategic plan to identify and prioritize key initiatives that will help UNOS achieve the vision of a lifesaving transplant for everyone in need.

2. What committees exist within your board of directors?

In 2012, the board formed three subcommittees to study specific issues and make recommendations to the board. These subcommittees include: Corporate Affairs Committee, UNOS Finance Committee, and UNOS IT Advisory Committee.

The UNOS Corporate Affairs Committee (CAC) acts as a governing body for all UNOS corporate matters and continues the work of the UNOS Board of Directors between meetings. The CAC oversees

the actions of the UNOS corporate Finance Committee and IT Advisory Committee. The CAC develops a strategic plan for the corporation and oversees its execution. It identifies strategic priorities, manages organizational risks, and sets standards for organizational performance. It also oversees the work of the corporation in fulfilling the terms of the OPTN contract with the U.S. Health and Human Services' Health Resources and Services Administration (HRSA). The CAC is currently led by Chair Matthew Cooper, MD of Medstar Georgetown Transplant Institute.

The UNOS Finance Committee reports to the CAC. The Finance Committee reviews financial policies, goals, and budgets that support the mission, values, and strategic plan of UNOS. The Committee reviews UNOS' financial performance against its short-term and long-term goals, as set forth in the UNOS Strategic Plan. The Committee is responsible for securing the annual audit, and reviews corporate investment policies and investment performance on a routine basis. The Finance Committee is led by Chair Bradley Kornfeld, JD.

The Information Technology Advisory Committee (ITAC) of the UNOS Board of Directors reports to the CAC. The ITAC provides oversight duties for UNOS IT operations as well as providing external expertise to UNOS' IT executive management. The ITAC assists the CAC in development of a strategic plan for IT needs of the corporation and oversees the execution of the IT plan. The ITAC identifies strategic priorities in IT, and assists the CAC in setting standards for organizational IT performance. It also oversees the work of the corporation in fulfilling the IT-related requirements of the OPTN contract. The ITAC is led by Chair Kimberly Rallis, BS, MHA of Jewish Hospital.

A full list of UNOS Board of Directors officers and members and their affiliations is available at https://unos.org/community/board-committees.

3. How does the board of directors make decisions?

UNOS Board of Directors meets throughout the year to review operational functions, OPTN oversight, and innovations to increase transplant. Committees, public comment, and community feedback all influence the Board of Directors decisions as to what is best for the transplant community and the organization.

B) Management

1. **Describe the qualifications of key personnel/staff responsible for the project.**

Casey Humphries, M.S. is the program manager for UNOS Labs. She has served in this role for three and a half years, prior to which she served as board liaison to the UNOS Board of Directors. Before joining UNOS, Humphries was a logistics coordinator at WestRock and held various roles at the Virginia Commonwealth University School of Engineering, alongside a consultant role at the National Aeronautics and Space Administration (NASA), Langley facility managing the restructuring of their college outreach program. Humphries obtained her bachelor's and master's degrees in biomedical engineering from Virginia Commonwealth University with an emphasis on biomechanics and physiology, where she developed a computational model of the elbow for studying the impact of catastrophic injuries and subsequent repairs on joint motion. She also developed a biosensor research device for measuring temperature and pressure underneath setting casts.

Amy Putnam, M.S.W., M.B.A. is the Director of IT Customer Advocacy at UNOS. Putnam joined UNOS' department of member quality in 2006 as manager of survey services and was named assistant director of the department in 2011. She then was asked to join IT's TransNet project and lead its customer advocacy efforts and, in that capacity, she and her team established a highly successful customer council. Previously, she was a medical social worker in the department of care coordination

at Virginia Commonwealth University (VCU) Medical Center in Richmond. She has two master's degrees from VCU, one in social work and the other in business administration.

Michael Ghaffari, B.S. is an Assistant Director of Software Engineering at UNOS. Ghaffari joined UNOS' department of Software Engineering in 2011 as a Software Engineer. As a previous engineer that worked on the systems that support our Nation's Transplantation Network, his hands on knowledge has supported his transition to Leadership roles with UNOS since 2016. He actively manages teams that supports our mobile responsive efforts and Application Architecture. This has led to implementations of projects that include SimUNet, DonorNet Mobile, Organ Tracking Service, and actively our efforts of integrating Predictive Analytics into DonorNet. He is a member of the rvatech NextGen committee. Ghaffari acquired his Bachelors of Science in Computer Science at Virginia Commonwealth University.

Carlos Martinez, M.S., is a Data Scientist in the UNOS Research Department. Among other projects, he has been involved with logistics research at UNOS since the start of his three-year tenure in 2018. Other ongoing projects include utilizing natural language processing and image processing techniques to build predictive models that support clinical decision making in the transplantation process. Prior to joining UNOS, he worked in a bioinformatics capacity for the Kirchhoff Lab at NYU Langone Medical Center studying the genetics of hereditary melanoma and breast cancer. He holds a MS degree in Electrical Engineering from Georgia Tech with a focus on signal processing and machine learning techniques as well as a BS in Mathematics from the NYU Tandon School of Engineering.

Ryan Ehrensberger, Ph.D., FACHE, is Chief Growth Officer at UNOS. He leads growth and innovation across the organization to build new partnerships, strategies and capabilities for organizational sustainability. Before joining UNOS, Ehrensberger was a consultant at Hammes Company, where he provided strategic planning and healthcare advisory consulting services to hospitals and health care systems throughout the country. He also previously worked as Administrative Director for Business Development at Bon Secours Virginia Health System where he developed and managed new service lines for the system. Ehrensberger acquired his Bachelors of Science at Bowling Green State University, a Masters of Public Health from the University of Tennessee and his Ph.D. in Research and Evaluation Methodology from Virginia Commonwealth University.

Brian Shepard, M.B.A., is the Chief Executive Officer at UNOS. As CEO, Shepard directs the efforts of 450 UNOS staff to ensure that the nation's donation and transplant network efficiently and fairly serves the needs of transplant candidates and recipients, living donors and donor family members, and professionals in the field. He reports to the UNOS Board of Directors. Shepard has been with UNOS since 2010, and has been CEO since 2012. Prior to joining UNOS, Shepard served 15 years in various high-level positions in Virginia state government, capped by a term as Director of Policy in Governor Timothy M. Kaine's administration. Shepard has a bachelor's degree in history from Virginia Tech and a master's degree in business administration from the University of Virginia.

2. **What is the CEO/Executive Director's salary?** $537,000

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V. Project Budget and Narrative (Do not delete these instructions on your completed form and use this form).

A) **Budget Table**: Provide a detailed line-item budget for your **entire** program by completing the table below. Note that if funded, this is the budget that you will have to refer to in the Evaluation (Final) Report.

A breakdown of specific line item requests and attendant costs should include:

1) Line item requests for materials, supplies, equipment and others:
   a. Identify and list the type of materials, supplies, equipment, etc.
   b. Specify the unit cost, number of units, and total cost
   c. Use a formula/equation as applicable. (i.e. 40 books @ $100 each = $4000)
2) Line item requests for staff compensation, benefits: **Do not use FTE percentages**.
   a. Identify the position; for each position request, **specify the hourly rate and the number of hours** (i.e. $20/hr x 20 hours/week x 20 weeks = $8,000)
   b. For benefits, provide the formula and calculation (i.e. $8,000 x 25% = $2,000)
3) Line items on Salaries/Personnel included in budget (contribution or in-kind) but NOT requested from the Gimbel Foundation must be broken down per number 2) above: Provide rate of pay per hour and number of hours.
4) The Gimbel Foundation **does not fund indirect costs.**

Line Item Request	Line Item Explanation	Support From Your Agency	Support From Other Funders	Requested Amount From Gimbel	Line Item Total of Project
Personnel: Software Engineer (ITSE)	Travel App: 2 Software Engineers @ 32 hours/week x $39.26/hour x 24 weeks = $60,460.47 Benefits: $60,460.47 x 41.9% = $25,332.93 Total = $85,793.40 Organ Tracking: 40 hrs/week x $39.26/hour x 2 weeks = $3,140.80 Benefits: $3,410.80 x 41.9% = $1,316 Total = $4,456.80	$4,456.80		$85,793.40	$90,250.20
Personnel: Quality Assurance Engineer	Travel App: 32 hours/week x $41.73/hour x 24 weeks = $32,129.46 Benefits: $32,129.46 x 41.9% = $13,462.24 Total = $45,591.70	$4,736.80		$45,591.70	$50,328.50

	Organ Tracking: 40 hrs/week x $41.73/hour x 2 weeks = $3,338.13 Benefits: $3,338.13 x 41.9% = $1,398.67 Total = $4,736.80				
Personnel: UX Designer	Travel App: 5 hours/week x $42.30/hour x 8 weeks = $1,692.18 Benefits: $1,692.18 x 41.9% = $709.02 Total = $2,401.20			$2,401.20	$2,401.20
Personnel: Data Scientist	Travel App: 5.8 hours/week x $49.78/hour x 24 weeks = $6,969.42 Benefits: $6,969.42 x 41.9% = $2,920.18 Total = $9,889.60 Organ Tracking: 3.3 hours/week x $49.78/hour x 6 weeks = $995.63 Benefits: $995.63 x 41.9% = $417.17 Total = $1,412.80	$1,412.80		$9,889.60	$11,302.40
Personnel: Associate Data Scientist	Travel App: 4.2 hours/week x $40.94/hour x 12 weeks = $2,046.86 Benefits: $2,046.86 x 41.9% = $857.64 Total = $2,904.50			$2,904.50	$2,904.50
Personnel: IT Customer Advocacy Service Owner	Travel App: 8.3 hours/week x $45.24/hour x 24 weeks = $9,047.22 Benefits: $9,047.22 x 41.9% = $3,790.78 Total = $12,838.00 GEGO Collaboration: 4.2 hours/week x $45.24/hour x 12 weeks = $2,261.80			$16,047.50	$16,047.50

	Benefits: $2,261.80 x 41.9% = $947.70 Total = $3,209.50				
Personnel: Software Engineering Manager	Travel App: 8.3 hours/week x $58.66/hour x 24 weeks = $11,732.21 Benefits: $11,732.21 x 41.9% = $4,915.79 Total = $16,648.00			$16,648.00	$16,648.00
Personnel: Research Project Management Lead	Travel App: 1.6 hours/week x $52.78/hour x 24 weeks = $2,111.06 Benefits: $2,111.06 x 41.9% = $884.54 Total = $2,995.60 Organ Tracking: 0.7 hours/week x $52.78/hour x 6 weeks = $211.11 Benefits: $211.11 x 41.9% = $88.45 Total = $299.56	$299.56		$2,995.60	$3,295.16
Personnel: UNOS Labs Program Manager	Travel App: 2 hours/week x $35.58/hour x 24 weeks = $1,779.07 Benefits: $1,779.07 x 41.9% = $745.43 Total = $2,524.50 GEGO Collaboration: 4.5 hours/week x $35.58/hour x 36 weeks = $5,693.02 Benefits: $5,693.02 x 41.9% = $2,385.38 Total = $8,078.40 Organ Tracking: 1.7 hours/week x $35.58/hour x 6 weeks = $355.81 Benefits: $355.81 x 41.9% = $149.09 Total = $504.90	$504.90		$10,602.90	$11,107.80

Personnel: Director IT Customer Advocacy	GEGO Collaboration: 4.5 hours/week x $80.90/hour x 36 weeks = $12,944.33 Benefits: $12,944.33 x 41.9% = $5,423.67 Total = $18,368.00 Organ Tracking: 1.7 hours/week x $80.90/hour x 6 weeks = $809.02 Benefits: $809.20 x 41.9% = $338.98 Total = $1,148.00	$1,148.00		$18,368.00	$19,516.00
Personnel: Assistant Director Software Engineering	GEGO Collaboration: 4.2 hours/week x $55.89 x 12 weeks = $2,794.57 Benefits: $2,794.57 x 41.9% = $1,170.93 Total = $3,965.50			$3,965.50	$3,965.50
Personnel: Business Intelligence Analyst	Organ Tracking: 16.7 hrs/week x $35.58/hour x 6 weeks = $3,558.14 Benefits: $3,558.14 x 41.9% = $1,490.86 Total = $5,049.00	$5,049.00			$5,049.00
Personnel: Data Engineer	Organ Tracking: 3.3 hrs/week x $51.50/hour x 6 weeks = $1,030.02 Benefits: $1,030.02 x 41.9% = $431.58 Total = $1,461.60	$1,461.60			$1,461.60
Personnel: Data Analyst	Organ Tracking: 3.3 hrs/week x $33.85/hour x 6 weeks = $677.10 Benefits: $677.10 x 41.9% = $283.70 Total = $960.80	$960.80			$960.80
Personnel: Project management and oversight	CEO .5 hr/week x $130.34/hour x 42 weeks = $2,737.10 Benefits: $2,737.10 x 41.9% = $1,146.85	$23,118.75			$23,118.75

	Total = $3,883.95 CGO 2 hr/week x $130.34/hour x 52 weeks = $13,555.18 Benefits: $13,555.18 x 41.9% = $5,679.62 Total = $19,234.80				
Contractor: Design/UX Team	Project Leader, Software Engineer Leader, UX Analyst, UI Designer; estimated time 3 months x $40,000/month = $120,000.00			$120,000.00	$120,000.00
Contractor: Software Development Team	IoT/GPS tracking device upgrade Project Leader, Software Engineer Leader, Software Architect, Senior Software Engineer, Software Engineer, QA Engineer; estimated time 5 months x $80,000/month = $400,000.00			$400,000.00	$400,000.00
Contractor: Deployment and Verification Team	Project Leader, Software Engineer Leader, Software Architect, Senior Software Engineer, Senior QA Engineer, Software Engineer, QA Engineer; estimated time 3 months x $30,000/month = $90,000.00			$90,000.00	$90,000.00
OAG Subscription	$916.67/month x 12 months = $11,000.04			$11,000.04	$11,000.04
TOTALS:		$43,149.01		$836,208.30	$879,357.31

B) **<u>Narrative:</u>** The budget narrative is the justification of "how" and/or "why" a line item helps to meet the program deliverables. Provide a description for each line item. Each line item must have a narrative. Explain how the line item relates to the program. If you are requesting funds

to pay for staff, list the specific duties of each position. See attached SAMPLE Program Budget and Budget Narrative

1. Personnel: Software Engineer (ITSE)
   Responsible for the architecture and programming of the Travel App integration into DonorNet. The Software Engineer will also modify application programming interfaces (APIs) between UNOS and GEGO to pass donor identification number and organ information to GEGO for display in their system and in notifications for Organ Tracking.

   Travel App: 2 Software Engineers at 32 hours/week x $39.26/hour x 24 weeks = $60,460.47
   Benefits: $60,460.47 x 41.9% = $25,332.93
   Total = $85,793.40

   Organ Tracking: 40 hours/week x $39.26/hour x 2 weeks = $3,140.80
   Benefits: $3,140.80 x 41.9% = $1,316.00
   Total = $4,456.80

2. Personnel: Quality Assurance Engineer
   Responsible for all code testing for Software Engineering efforts and performing quality review of code for the Travel App integration and Organ Tracking notifications changes.

   Travel App: 32 hours/week x $41.73/hour x 24 weeks = $32,129.46
   Benefits: $32,129.46 x 41.9% = $13,462.24
   Total = $45,591.70

   Organ Tracking: 40 hours/week x $41.73/hour x 2 weeks = $3,338.13
   Benefits: $3,338.13 x 41.9% = $1,398.67
   Total = $4,736.80

3. Personnel: UX Designer
   Develops the user interface and tests user experience for the DonorNet integration.

   Travel App: 5 hours/week x $42.30/hour x 8 weeks = $1,692.18
   Benefits: $1,692.18 x 41.9% = $709.02
   Total = $2,401.20

4. Personnel: Data Scientist
   Developer of the Travel App and responsible for creating all enhancements to the program. Also collaborating on the Organ Tracking enhancement, updating appropriate APIs and ensuring proper access and flow of data.

   Travel App: 5.8 hours/week x $49.78/hour x 24 weeks = $6,969.42
   Benefits: $6,969.42 x 41.9% = $2,920.18
   Total = $9,889.60

   Organ Tracking: 3.3 hours/week x $49.78/hour x 6 weeks = $995.63
   Benefits: $995.63 x 41.9% = $417.17
   Total = $1,412.80

5. Personnel: Associate Data Scientist

Works with the Data Scientist on the Travel App by providing code review.

Travel App: 4.2 hours/week x $40.94/hour x 12 weeks = $2,046.86
Benefits: $2,046.86 x 41.9% = $857.64
Total = $2,904.50

6. Personnel: IT Customer Advocacy Service Owner
   Gathers requirements for technical projects, including the Travel App integration and the development of RTOMS 2.0 with GEGO, develops relevant process maps and wireframes, and is part of IT Scrum ceremonies.

   Travel App: 8.3 hours/week x $45.24/hour x 24 weeks = $9,047.22
   Benefits: $9,047.22 x 41.9% = $3,790.78
   Total = $12,838.00

   GEGO Collaboration: 4.2 hours/week x $45.24/hour x 12 weeks = $2,261.80
   Benefits: $2,261.80 x 41.9% = $947.70
   Total = $3,209.50

7. Personnel: Software Engineering Manager
   Technical support, project leadership and oversight for the Travel App DonorNet integration effort.

   Travel App: 8.3 hours/week x $58.66/hour x 24 weeks = $11,732.21
   Benefits: $11,732.21 x 41.9% = $4,915.79
   Total = $16,648.00

8. Personnel: Research Project Management Lead
   Performs project management activities for Travel App integration as well as the Organ Tracking dashboard effort.

   Travel App: 1.6 hours/week x $52.78/hour x 24 weeks = $2,111.06
   Benefits: $2,111.06 x 41.9% = $884.54
   Total = $2,995.60

   Organ Tracking: 0.7 hours/week x $52.78/hour x 6 weeks = $211.11
   Benefits: $211.11 x 41.9% = $88.45
   Total = $299.56

9. Personnel: UNOS Labs Program Manager
   Oversees UNOS Labs projects, including the Organ Tracking developments, the GEGO collaboration and the Travel App integration. Provides strategic direction and interfaces across departments.

   Travel App: 2 hours/week x $35.58/hour x 24 weeks = $1,779.07
   Benefits: $1,779.07 x 41.9% = $745.43
   Total = $2,524.50

   GEGO Collaboration: 4.5 hours/week x $35.58/hour x 36 weeks = $5,693.02
   Benefits: $5,693.02 x 41.9% = $2,385.38

Total = $8,078.40

Organ Tracking: 1.7 hours/week x $35.58/hour x 6 weeks = $355.81
Benefits: $355.81 x 41.9% = $149.09
Total = $504.90

10. Personnel: Director, IT Customer Advocacy
    Serves as technical lead on the GEGO collaboration to create RTOMS 2.0 and consults on the Organ Tracking enhancement development.

    GEGO Collaboration: 4.5 hours/week x $80.90/hour x 36 weeks = $12,944.33
    Benefits: $12,944.33 x 41.9% = $5,423.67
    Total = $18,368.00

    Organ Tracking: 1.7 hours/week x $80.90/hour x 6 weeks = $809.02
    Benefits: $809.20 x 41.9% = $338.98
    Total = $1,148.00

11. Personnel: Assistant Director Software Engineering
    Provides technical consulting on the GEGO collaboration to develop RTOMS 2.0.

    GEGO Collaboration: 4.2 hours/week x $55.89 x 12 weeks = $2,794.57
    Benefits: $2,794.57 x 41.9% = $1,170.93
    Total = $3,965.50

12. Personnel: Business Intelligence Analyst
    Responsible for workshopping, developing, and testing the Organ Tracking dashboard.

    Organ Tracking: 16.7 hrs/week x $35.58/hour x 6 weeks = $3,558.14
    Benefits: $3,558.14 x 41.9% = $1,490.86
    Total = $5,049.00

13. Personnel: Data Engineer
    Creates and maintains underlying databases for the Organ Tracking enhancements.

    Organ Tracking: 3.3 hrs/week x $51.50/hour x 6 weeks = $1,030.02
    Benefits: $1,030.02 x 41.9% = $431.58
    Total = $1,461.60

14. Personnel: Data Analyst
    Supports Data Scientist on the APIs and for the Organ Tracking enhancements and cleaning data to enable research and analysis.

    Organ Tracking: 3.3 hrs/week x $33.85/hour x 6 weeks = $677.10
    Benefits: $677.10 x 41.9% = $283.70
    Total = $960.80

15. Personnel: Project management and oversight
    Provide overall project management and oversight, strategic collaboration

CEO .5 hr/week x $130.34/hour x 42 weeks = $2,737.10
Benefits: $2,737.10 x 41.9% = $1,146.85
Total = $3,883.95

CGO 2 hr/week x $130.34/hour x 52 weeks = $13,555.18
Benefits: $13,555.18 x 41.9% = $5,679.62
Total = $19,234.80

16. Contractor: Design UX Team
    Includes the entire redesign of the UNOS Portal; analysis of the users interactions and information requirements, improving the experience of the portal considering usability principles and testing with users. Team comprised of: Project Leader, Software Engineer Leader, UX Analyst, and UI Designer. Estimated time: 3 months x $40,000/month = $120,000.00

17. Contractor: Software Development Team for IoT/GPS tracking device upgrade
    Team will completely review the code, looking for improvements in the portal architecture, its performance and the incorporation of new notifications and features resulting from identified usability thanks to the new hardware. Team comprised of: Project Leader, Software Engineer Leader, Software Architect, Senior Software Engineer, Software Engineer, and QA Engineer. Estimated time: 5 months x $80,000/month = $400,000.00

18. Contractor: Deployment and Verification Team
    Includes user acceptance testing, documentation, training, and delivery. Team comprised of: Project Leader, Software Engineer Leader, Software Architect, Senior Software Engineer, Senior QA Engineer, Software Engineer, and QA Engineer.
    Estimated time: 3 months x $30,000/month = $90,000.00

19. OAG Subscription for access to flight information
    Flight database provider, monthly access subscription
    $916.67/month x 12 months = $11,000.04

2021 S.L. Gimbel Foundation APPLICATION

VI. Sources of Funding: Please list your current sources of funding and amounts.

Secured/Awarded

Name of Funder: Foundation, Corporation, Government	Amount
Richard S. Reynolds Foundation (Awarded towards understanding CIT in 2019 and to support first phase of Travel App in 2020)	$60,000
Fresenius Medical Care Foundation (Awarded in 2020 towards developing organ tracking, understanding CIT, and Travel App)	$106,185
UNOS (in past development in 2020 and slotted for next phases of organ travel/logistics updates)	$243,149.01

Pending

Name of Funder: Foundation, Corporation, Government	Amount	Decision Date

Diversity of Funding Sources: A financially healthy organization should have a diverse mix of funding sources. Complete those categories that apply to your organization using figures from your most recent fiscal year.

Funding Source	Amount	% of Total Revenue	Funding Source	Amount	% of Total Revenue
Contributions	$848,702	1%	Government Contract	$53,424,847	79%
Fundraising/Special Events	$383,450	1%	UNOS Fees	$10,845,896	16%
Corp/Foundation Grants	$623,544	1%	Services	$1,715,816	3%
Government Grants	$0	0%	Miscellaneous	$123,912	0.2%

Notes: These figures come from our unaudited FY2021 financial statements.

S.L. Gimbel Foundation APPLICATION

VII. Financial Analysis

Agency Name: United Network for Organ Sharing (UNOS)
Most Current Fiscal Year (Dates): From10/1/2019 **To:**9/30/2020

This section presents an overview of an applicant organization's financial health and will be reviewed along with the grant proposal. Provide all the information requested on your **entire organization.** Include any notes that may explain any extraordinary circumstances. Information should be taken from your most recent 990 and audit. **Double check your figures**!

Form 990, Part IX: Statement of Functional Expenses

1) Transfer the totals for each of the columns, Line 25- Total functional expenses (page 10)

(A) Total Expenses	(B) Program service expenses	(C) Management & general expenses	(D) Fundraising expenses
$65,045,655	$56,943,828	$7,832,480	$269,347

2) Calculate the percentages of Columns B, C, and D, over A (per totals above)

- Program services (B) – A general rule is that at least 75% of total expenses should be used to support programs
- Management & general administration (C) – A general rule is that no more than 15% of total expenses should be used for management & general expenses
- Fundraising (D) – A general rule is that no more than 10% of total expenses should be used for fundraising

(A) Total Expenses	(B) Program service expenses	(C) Management & general expenses	(D) Fundraising expenses
$65,045,655	Columns B / A x 100	Columns C / A x 100	Columns D / A x 100
Must equal 100%	87.54%	12.04%	.41%

3) Calculate the difference between your CURRENT year budget for management & general expenses and your previous management & general expenses per your 990 (Column C)

Percentage of Organization's Current Total Budget used for Administration	Column C, Management & general expenses per 990 above	**Differential** 8.6%

If the differential is above (+) or below (-) **10%**, provide an explanation:

S.L. Gimbel Foundation APPLICATION

Quick Ratio: Measures the level of liquidity and measures only current assets that can be quickly turned to cash. A generally standard Quick Ratio equals 1 or more.

Cash	+ Accounts Receivables	/Current Liabilities	= Quick Ratio
$81,942,792	$13,193,489	$48,942,391	1.94

Excess or Deficit for the Year:

Excess or (Deficit) Most recent fiscal year end	Excess or (Deficit) Prior fiscal year end
$3,697,089	$3,689,324

Notes:

VIII. EMAIL TWO PDF files to Gimbel@iegives.org

A. One PDF file of the following, #1 to #5 **B. Second PDF file of the following, #6 & #7**

#1	Completed Grant Application Form (cover sheet, narrative), budget page and budget narrative (see sample) and sources of funding, financial analysis page	#6	A copy of your most recent year-end financial statements (audited if available)
#2	Your current operating budget and the previous year's actual expenses (see sample Budget Comparison)	#7	A copy of your most recent 990. **Please make sure that the Form 990 you submit is no more than two (2) years old.**
#3	Part IX **only** of the 990 form, Statement of Functional Expenses (one page). **Please make sure that the Form 990 you submit is no more than two (2) years old.**		
#4	For past grantees, a copy of your most recent final report.		
#5	A copy of your current 501(c)(3) letter from the IRS		

SAMPLE Budget Comparison

	Actuals Most Recently Completed Year	Budget Projections Current Year	Variance
Income	**20____**	**20____**	
Individual Contributions	-	-	-
Corporate Contributions	-	-	-
Foundation Grants	-	-	-
Government Contributions	-	-	-
Other Earned Income	-	-	-
Other Unearned Income	-	-	-
Interest & Dividend Income	-	-	-
Total Income	-	-	-
Expenditures			
Personnel			
Salary CEO/Executive Director	-	-	-
Staff Salary (total)	-	-	-
Payroll Taxes	-	-	-
Insurance - Workers' Comp	-	-	-
Insurance - Health	-	-	-
Payroll Services	-	-	-
Retirement	-	-	-
Total Personnel	-	-	-
General Program/Administrative			
Bank/Investment Fee	-	-	-
Publications	-	-	-
Conferences & Meetings	-	-	-
Mileage	-	-	-
Audit & Accounting	-	-	-
Program Consultants	-	-	-
Insurance Expense	-	-	-
Telephone Expense - Land Lines	-	-	-
DSL & Internet	-	-	-
Website	-	-	-
Office Supplies	-	-	-
Postage & Delivery	-	-	-
Printing & Copying	-	-	-
Miscellaneous	-	-	-
Total General Program/Administrative	-	-	-
Total Expenditures	-	-	-
Revenue Less Expense	-	-	-

SAMPLE Project Budget and Budget Narrative

Line Item Request	Line Item Explanation	Support From Your Agency	Support From Other Funders	Requested Amount From TCF	Line Item Total of Project
Personnel: Project Coordinator	10 hours/week x $20/hour x 40 weeks = $8,000			$ 8,000	$ 8,000
Meetings	10 meetings x $200/meeting for food and drinks = $2,000		$1,000	$ 1,000	$ 2,000
Training and Education: Honoraria for trainers	10 trainers x $200/trainer = $2,000			$ 2,000	$ 2,000
Materials and Supplies	$40/student x 40 students = $1,600	$ 600		$ 1,000	$ 1,600
Workbooks	$30 each x 40 students = $1,200	$ 200		$ 1,000	$ 1,200
Facility Cost	$300/meeting x 10 meetings = $3,000			$ 3,000	$ 3,000
Grant awards		$5,000	$5,000	$10,000	$20,000
Youth Recognition Event: Food	$10/person x 100 people = $1,000			$ 1,000	$ 1,000
TOTALS:		$5,800	$ 6,000	$27,000	$38,800

Budget Narrative:

1. Personnel: Project Coordinator
   Coordinate all activities of the Youth Program such as setting meeting schedules, contacting students, preparing materials for meetings, scheduling trainers, etc.
   10hrs/week x $20/hr. x 40 weeks = $8,000
2. Meetings: 10 meetings x $200/meeting for food, drinks, snacks. There are 40 students per meeting. Cost per student is $5 x 40 students = $2,000
3. Training and Education: Honoraria for 10 trainers/presenters x $200/trainer = $2,000.
4. Materials & Supplies - paper, binders, pens, etc. for meetings, activities, events.
   40 students x $40 per student = $1,600.
5. Workbooks: Leadership training workbooks costs $30 each x 40 students = $1,200
6. Facility cost – Room cost at a nonprofit agency is $100/hour x 3 hours per meeting x 10 meetings = $3,000
7. Grantmaking – Grant awards to nonprofit youth agencies. Maximum $2500/agency x 8 = $20,000
8. Youth Recognition Event – end of the year event for students and grantees.
   100 attendees x $10/person = $1,000

United Network for Organ Sharing
FY 2021 Actuals vs Current Year Budget

	Actuals FY 2021	Current Year Budget	Variance
Revenue			
Government Contract	$ 53,424,847	$ 64,297,113	($10,872,266)
UNOS Fees	10,845,896	3,162,060	7,683,836
Services	1,715,816	2,287,250	(571,434)
Contributions	848,702	900,000	(51,298)
Fundraising/Special Events	383,450	628,000	(244,550)
Corp/Foundation Grants	623,544	750,000	(126,456)
Misc. Revenue	123,912	165,000	(41,088)
Total Revenue	**$ 67,966,167**	**$ 72,189,423**	**($4,223,256)**
Expenditures			
Personnel			
Salary CEO	$ 537,000	$ 537,000	$ -
Staff Salary	37,849,472	39,216,350	(1,366,878)
Payroll Taxes & Benefits	8,582,346	10,788,210	(2,205,864)
Total Personnel	**$ 46,968,817**	**$ 50,541,560**	**($3,572,743)**
Operating Expenses			
Employee Training	$245,800	$649,800	($404,000)
Temporary Help	190,427	40,000	150,427
Recruiting	63,816	149,750	(85,934)
Meetings & Travel	266,288	3,935,650	(3,669,362)
Building Maintenance & Office Supplies	3,956,927	4,622,600	(665,673)
Legal	1,659,655	650,000	1,009,655
Auditing	61,150	52,500	8,650
Purchased Services	6,353,559	5,395,070	958,489
Telecom	498,240	545,300	(47,060)
Printing	249,344	323,850	(74,506)
Insurance	276,357	275,000	1,357
Interest and Taxes	280,417	558,000	(277,583)
IT Software Subscriptions	2,915,425	3,645,620	(730,195)
Fundraising & Community Development	16,324	77,000	(60,676)
Postage	86,119	73,450	12,669
Other	180,072	217,490	(37,418)
Total Operating Expense	**$ 17,299,921**	**$ 21,211,080**	**($3,911,159)**
Total Expenditures	**$64,268,738**	**$71,752,640**	**($7,483,902)**
Revenue Less Expense	**$ 3,697,429**	**$ 436,783**	**$ 3,260,646**

Part IX Statement of Functional Expenses

Section 501(c)(3) and 501(c)(4) organizations must complete all columns. All other organizations must complete column (A).

Check if Schedule O contains a response or note to any line in this Part IX ☐

Do not include amounts reported on lines 6b, 7b, 8b, 9b, and 10b of Part VIII.	(A) Total expenses	(B) Program service expenses	(C) Management and general expenses	(D) Fundraising expenses
1 Grants and other assistance to domestic organizations and domestic governments. See Part IV, line 21				
2 Grants and other assistance to domestic individuals. See Part IV, line 22				
3 Grants and other assistance to foreign organizations, foreign governments, and foreign individuals. See Part IV, lines 15 and 16				
4 Benefits paid to or for members				
5 Compensation of current officers, directors, trustees, and key employees	2,466,186.	1,328,504.	1,137,682.	
6 Compensation not included above to disqualified persons (as defined under section 4958(f)(1)) and persons described in section 4958(c)(3)(B)				
7 Other salaries and wages	29,992,863.	28,120,626.	1,722,132.	150,105.
8 Pension plan accruals and contributions (include section 401(k) and 403(b) employer contributions)	3,003,128.	2,813,931.	176,509.	12,688.
9 Other employee benefits	8,419,600.	7,766,951.	629,377.	23,272.
10 Payroll taxes	2,626,935.	2,280,179.	335,040.	11,716.
11 Fees for services (nonemployees):				
a Management				
b Legal	1,312,364.	1,262,076.	50,288.	
c Accounting	49,565.		49,565.	
d Lobbying	243,482.		243,482.	
e Professional fundraising services. See Part IV, line 17				
f Investment management fees				
g Other. (If line 11g amount exceeds 10% of line 25, column (A) amount, list line 11g expenses on Sch O.)	2,552,139.	2,020,738.	491,157.	40,244.
12 Advertising and promotion				
13 Office expenses	1,633,911.	1,185,763.	434,281.	13,867.
14 Information technology	6,057,881.	6,057,881.		
15 Royalties				
16 Occupancy	2,015,975.	1,334,208.	681,767.	
17 Travel	636,629.	609,892.	21,819.	4,918.
18 Payments of travel or entertainment expenses for any federal, state, or local public officials				
19 Conferences, conventions, and meetings	1,081,447.	1,035,331.	33,952.	12,164.
20 Interest	120,969.		120,969.	
21 Payments to affiliates				
22 Depreciation, depletion, and amortization	1,852,368.	1,117,739.	734,629.	
23 Insurance	209,960.		209,960.	
24 Other expenses. Itemize expenses not covered above (List miscellaneous expenses on line 24e. If line 24e amount exceeds 10% of line 25, column (A) amount, list line 24e expenses on Schedule O.)				
a RECRUITING/TRAINING	729,168.	9,662.	719,133.	373.
b UBI TAX	40,738.		40,738.	
c				
d				
e All other expenses	347.	347.		
25 **Total functional expenses.** Add lines 1 through 24e	65,045,655.	56,943,828.	7,832,480.	269,347.
26 **Joint costs.** Complete this line only if the organization reported in column (B) joint costs from a combined educational campaign and fundraising solicitation. Check here ▶ ☐ if following SOP 98-2 (ASC 958-720)				

Internal Revenue Service

Department of the Treasury

P. O. Box 2508
Cincinnati, OH 45201

Date: December 26, 2001

Person to Contact:
Paul Perry 31-07423
Customer Service Representative
Toll Free Telephone Number:
8:00 a.m. to 9:30 p.m. EST
877-829-5500
Fax Number:
513-263-3756
Federal Identification Number:
54-1327878

United Network for Organ Sharing
1100 Boulders Pky
Richmond, VA 23225-4035

Dear Sir or Madam:

This letter is in response to your request for a copy of your organization's determination letter. This letter will take the place of the copy you requested.

Our records indicate that a determination letter issued in November 1985 granted your organization exemption from federal income tax under section 501(c)(3) of the Internal Revenue Code. That letter is still in effect.

Based on information subsequently submitted, we classified your organization as one that is not a private foundation within the meaning of section 509(a) of the Code because it is an organization described in sections 509(a)(1) and 170(b)(1)(A)(vi).

This classification was based on the assumption that your organization's operations would continue as stated in the application. If your organization's sources of support, or its character, method of operations, or purposes have changed, please let us know so we can consider the effect of the change on the exempt status and foundation status of your organization.

Your organization is required to file Form 990, Return of Organization Exempt from Income Tax, only if its gross receipts each year are normally more than $25,000. If a return is required, it must be filed by the 15th day of the fifth month after the end of the organization's annual accounting period. The law imposes a penalty of $20 a day, up to a maximum of $10,000, when a return is filed late, unless there is reasonable cause for the delay.

All exempt organizations (unless specifically excluded) are liable for taxes under the Federal Insurance Contributions Act (social security taxes) on remuneration of $100 or more paid to each employee during a calendar year. Your organization is not liable for the tax imposed under the Federal Unemployment Tax Act (FUTA).

Organizations that are not private foundations are not subject to the excise taxes under Chapter 42 of the Code. However, these organizations are not automatically exempt from other federal excise taxes.

Donors may deduct contributions to your organization as provided in section 170 cf the Code. Bequests, legacies, devises, transfers, or gifts to your organization or for its use are deductible for federal estate and gift tax purposes if they meet the applicable provisions of sections 2055, 2106, and 2522 of the Code.

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Your organization is not required to file federal income tax returns unless it is subject to the tax on unrelated business income under section 511 of the Code. If your organization is subject to this tax, it must file an income tax return on the Form 990-T, Exempt Organization Business Income Tax Return. In this letter, we are not determining whether any of your organization's present or proposed activities are unrelated trade or business as defined in section 513 of the Code.

The law requires you to make your organization's annual return available for public inspection without charge for three years after the due date of the return. If your organization had a copy of its application for recognition of exemption on July 15, 1987, it is also required to make available for public inspection a copy of the exemption application, any supporting documents and the exemption letter to any individual who requests such documents in person or in writing. You can charge only a reasonable fee for reproduction and actual postage costs for the copied materials. The law does not require you to provide copies of public inspection documents that are widely available, such as by posting them on the Internet (World Wide Web). You may be liable for a penalty of $20 a day for each day you do not make these documents available for public inspection (up to a maximum of $10,000 in the case of an annual return).

Because this letter could help resolve any questions about your organization's exempt status and foundation status, you should keep it with the organization's permanent records.

If you have any questions, please call us at the telephone number shown in the heading of this letter.

This letter affirms your organization's exempt status.

Sincerely,

John E. Ricketts

John E. Ricketts, Director, TE/GE
Customer Account Services